

CLAIMS

24. A process for regulating the porosity and printing properties of uncoated wood-containing paper, the process comprising using a sufficient quantity of colloidal PCC having a BET surface area of 10-100 m<sup>2</sup>/g as a filler to achieve a desired porosity of the paper.

25. A process according to claim 24 wherein the paper is SC paper, in particular SC-A paper, and wherein colloidal PCC is used in a quantity sufficient to achieve a porosity of at most 0.30 µm/Pas.

26. A process according to claim 24 wherein the paper is SC-B paper, and wherein colloidal PCC is used in a quantity sufficient to achieve a porosity of at most 0.60 µm/Pas.

15 27. A process according to claim 24 wherein the paper is newsprint, and wherein colloidal PCC is used in an amount sufficient to achieve a porosity of at most 20 µm/Pas.

28. A process according to claim 24 wherein the colloidal PCC has a BET surface area of 15-50 m<sup>2</sup>/g.

20 29. A process according to claim 28 wherein the colloidal PCC has a BET surface area of 20-30 m<sup>2</sup>/g.

30. A process according to claim 24 wherein colloidal PCC is incorporated into the paper in an amount of at least about 1% by weight based on the total weight of the paper.

34. A process according to claim 30 wherein colloidal PCC is incorporated into the paper in an amount of at least about 2% by weight based on the total weight of the paper.

30 32. Uncoated wood-containing paper containing colloidal PCC.

33. Paper according to claim 32 containing colloidal PCC having a BET surface area of 10-100 m<sup>2</sup>/g as a filler.

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34. Paper according to claim 33 comprising at least one further filler selected from the group consisting of non-colloidal PCC, kaolin, calcined kaolin, gypsum, chalk, ground marble, silicate-containing minerals, sulphate-containing minerals, oxide-containing minerals, carbonate-containing minerals, hydroxide-containing minerals, calcium sulfoaluminates, plastic particles and organic pigments.

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35. Paper according to claim 33 wherein the colloidal PCC has a BET surface area of 15-50 m<sup>2</sup>/g.

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36. Paper according to claim 32 wherein the colloidal PCC is present in an amount of at least about 1% by weight based on the total weight of the paper.

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37. SC paper containing colloidal PCC and having a porosity of at most 0.30 µm/Pas.

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38. SC paper according to claim 36 wherein the paper is SC-A paper.

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39. SC-B paper containing colloidal PCC and having a porosity of at most 0.60 µm/Pas.

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40. Newsprint containing colloidal PCC and having a porosity of at most 20 µm/Pas.  
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41. Paper according to claim 36 comprising at least one further filler selected from the group consisting of non-colloidal PCC, kaolin, calcined kaolin, gypsum, chalk, ground marble, silicate-containing minerals, sulphate-containing minerals, oxide-containing minerals, carbonate-containing minerals, hydroxide-containing minerals, calcium sulfoaluminates, plastic particles and organic pigments.

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42. Paper according to claim 36 wherein the colloidal PCC has a BET surface area of 10-100 m<sup>2</sup>/g.

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43. A pigment mixture suitable for paper manufacture and comprising colloidal PCC having a BET surface area of 10-100 m<sup>2</sup>/g in combination with at least one filler selected from the group consisting of : kaolin, calcined kaolin, gypsum, chalk, ground marble, silicate-containing minerals, sulphate-containing minerals, oxide-containing minerals, carbonate-containing minerals, hydroxide-containing minerals, calcium sulfoaluminates, plastic particles and organic pigments.

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43. A pigment mixture suitable for paper manufacture and comprising a combination of colloidal PCC having a BET surface area of 10-100 m<sup>2</sup>/g and non-colloidal PCC.

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44. A pigment mixture according to any of claims 42-43 wherein the colloidal PCC comprises aggregates/agglomerates having an equivalent spherical particle size in the range 0.1-5.0 μm, wherein the aggregates/agglomerates consist of single crystals having 10 an equivalent spherical particle size of about 0.01-0.50 μm.